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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/742,686	12/20/2000	Vlad Mitlin	3Com-77(3354TDCUSP)	5548
7265	7590	11/19/2004	EXAMINER	
MICHAELSON AND WALLACE PARKWAY 109 OFFICE CENTER 328 NEWMAN SPRINGS RD P O BOX 8489 RED BANK, NJ 07701			PERILLA, JASON M	
			ART UNIT	PAPER NUMBER
			2634	

DATE MAILED: 11/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/742,686

Applicant(s)

MITLIN ET AL.

Examiner

Jason M Perilla

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8, 18-33 and 41-48 is/are allowed.
- 6) ☒ Claim(s) 9-14, 34-39 and 49-51 is/are rejected.
- 7) ☒ Claim(s) 15-17 and 40 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1-51 are pending in the instant application.

#### ***Drawings***

2. The drawings were received on July 14, 2004. These drawings are accepted by the Examiner.

#### ***Response to Amendment/Argument***

3. Applicant's arguments, see page 22, filed July 14, 2004, have been fully considered and are persuasive in view of the amendments to the claims. Therefore, the rejections and objections made in the office action dated March 10, 2004 have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made.

#### ***Claim Objections***

4. Claims 9, 10, 11-17, 34, 35, and 36-40 are objected to because of the following informalities:

Regarding claim 9, in lines 6, 7, and 9, "the number" should be replaced by --a number, and in line 8, "the discrete" should be replaced by --a discrete--.

Regarding claim 11, in lines 6, 7, and 9, "the number" should be replaced by --a number, and in line 8, "the discrete" should be replaced by --a discrete--.

Regarding claim 15, in line 5, "and a maximum" should be replaced by --a maximum.

Regarding claim 34, in lines 6, 7, and 9, "the number" should be replaced by --a number, and in line 8, "the discrete" should be replaced by --a discrete--.

Regarding claim 36, in lines 6, 7, and 9, "the number" should be replaced by --a number, and in line 8, "the discrete" should be replaced by --a discrete--.

Regarding claim 40, in line 5, "and a maximum" should be replaced by --a maximum.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 9, 10, 11-14, 34, 35, 36-39, and 49-51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 9, the claim is indefinite because the definition of a signal-to-noise ratio in line 4 is used ambiguously in the claim. In lines 4 and 5, a determination of a signal-to-noise ratio is made, and, in lines 7 and 8, a number of forward-error-correction control symbols in a discrete multi-tone symbol associated with the signal-to-noise ratio is stored in a table. However, in lines 9 and 10, a net coding gain is stored in the table for different values of signal-to-noise ratios although a plurality of signal to noise ratios are not defined. Further, it is unclear if the signal-to-noise ratios (undefined) are actually stored in the table, in multiple tables (undefined), or are only associated with undefined multiple tables. Therefore, the claim is indefinite because the table(s) and the signal-to-noise ratio(s) associated with or stored in the table(s) may not be definitively determined.

Regarding claim 10, the claim is rejected as being dependent upon parent claim 9.

Regarding claims 11, 34 and 36, the claims are indefinite for the same reasons as applied to claim 9 above in each case. Particularly, the claims are indefinite because the table(s) and the signal-to-noise ratio(s) associated with or stored in the table(s) may not be definitively determined in each case.

Claims 12-14, 35, and 37-39 are rejected as being dependent upon rejected parent claims.

Regarding claim 49, the claim is indefinite because, in lines 4 and 5, it is unclear if the net coding gain is based on one or more values of the signal to noise ratio. The phrase "the net coding gain being based **on a one or the values...**" is unclear and indefinite.

Claims 50 and 51 are rejected as being dependent upon a rejected parent claim.

***Allowable Subject Matter***

7. Withstanding the objections set forth above, indication of allowable subject matter is made with respect to claims 15-17 and 40.

Regarding claims 15-17 and 40, indication of allowable subject matter is made for the reasons set forth in the office action dated March 10, 2004.

8. Indication of allowable subject matter is made with respect to claims 1-8, 18-33, and 41-48.

Regarding claims 1-8, 18-33 and 41-48, indication of allowable subject matter is made because the prior art of record does not disclose the use of the particular relationships (in the form of equations) present in the independent claims.

**Conclusion**

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M Perilla whose telephone number is (571) 272-3055. The examiner can normally be reached on M-F 8-5 EST.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Chin can be reached on (571) 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jason M. Perilla  
November 9, 2004

jmp



CHIEH M. FAN  
PRIMARY EXAMINER